UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY Water Resources Division

RECORDS OF WATER LEVEL AND PUMPAGE FOR 1968 IN JOSHUA TREE NATIONAL MONUMENT, CALIFORNIA

> Prepared in cooperation with the National Park Service

ADMINISTRATIVE REPORT For U.S. Government use only

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By

G. A. Miller

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This report, prepared at the request of the National Park
Service, is part of a continuing inventory by the Geological
Survey of general hydrologic conditions at Joshua Tree National
Monument. The report includes water levels in selected observation
wells in the monument for spring and autumn 1968 and pumpage data
from Kaiser Steel Corp. for its wells in Pinto Basin during 1960-68.
Data on pumpage prior to 1960 and on water levels prior to those
shown are published in U.S. Geological Survey Water-Supply Paper
1475-0 and in previous annual reports to the National Park Service.



Hydrographs of observation wells in the monument (fig. 2) show a general, irregular, decline in ground-water level of from less than 10 feet to more than 50 feet during the period of record, 1958-6.

There is little correlation between the magnitude of water-level decline and pumping; for example, there is little or no pumping in the area near well 1S/7E-27R1 (Willets well), where the largest decline in water level occurred. Most of the decline is probably due to the relative dryness of the period. Increased precipitation during the last few years caused the water level in some wells to rise, but not to 1958 levels.



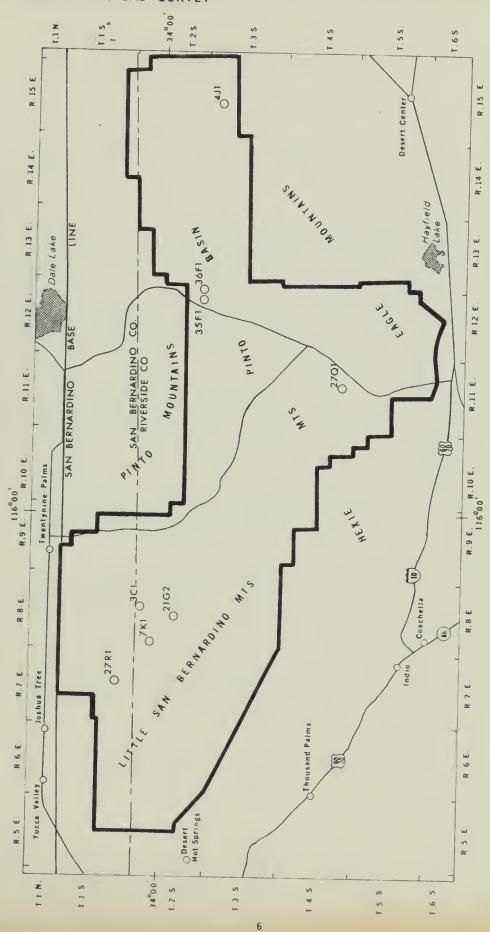
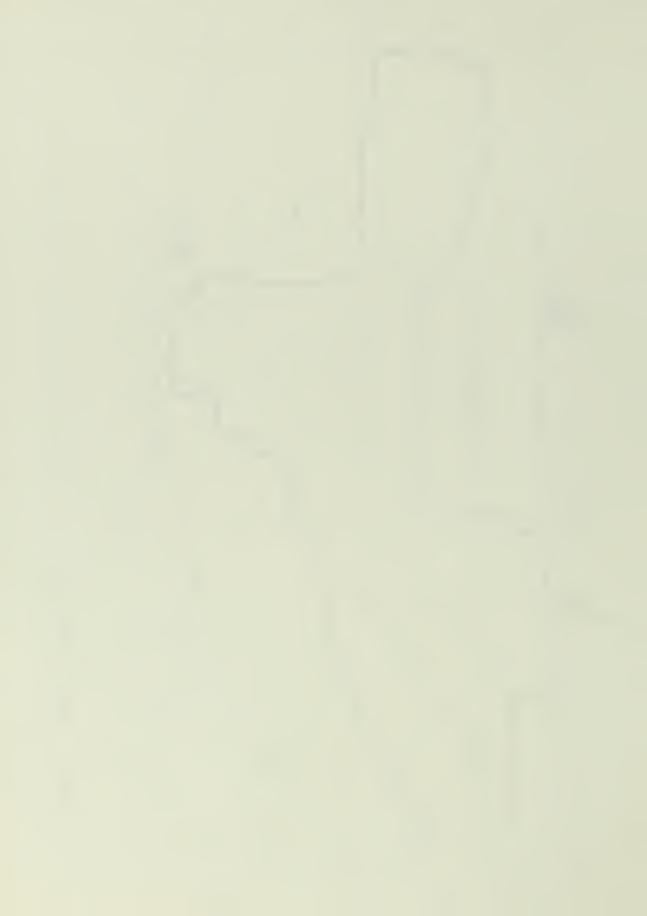


FIGURE 1. --Map of Joshua Tree National Monument showing location of observation wells.



gallons by Kaiser Steel Corp., except as indicated] [Metered in thousands of

The series in Finco basin by Kaiser Steel Corp., for the calendar years 1900-08-

	1960	1961	1962	1963	1964	1965	1966	1967	1968
January	a47,438	40,642	a41,750	a94,895	90,566	47,352	87,966	81,707	53,974
reblualy March April	47,642	53,092 a55,044	a54,650 a55,540	a96,320 a93,029	95,823	73,604 65,326	85,967	92,209	66,051 80,851
May June July August	50,635 54,746 44,657 55,808	a58,658 60,845 67,980 63,479	a59,790 a62,850 89,318 77,806	a92,799 102,085 110,127 105,358	95,247 94,186 94,964 90,967	76,176 76,347 87,849 94,977	94,969 92,445 83,258 a83,300	87,759 86,660 93,946 91,140	88,926 73,645 87,853 104,765
September October November December	51,654 42,101 38,539 39,307	a57,563 a46,918 a42,947 43,692	69,830 64,742 a66,400 a67,280	92,943 118,039 93,121 99,776	91,230 93,676 105,748 93,892	92,732 85,694 94,268 106,427	a83,400 a83,500 83,685 72,944	101,729 115,367 a90,804	79,712 75,700 48,920 a74,253
$\frac{2}{(gal)^{\frac{2}{3}}}$	569,000	630,000	749,000	1,190,000	1,140,000	3,000	1,020,000 3,100	1,090,000	891,000

For pumpage prior to 1960, see U.S. Geological Survey Water-Supply Paper 1475-0, "Hydrologic and Geologic Reconnaissance of Pinto Basin, Joshua Tree National Monument, Riverside County, California," by Fred Kunkel, 1963, p. 558.

^{2.} Rounded to three significant figures.

^{3.} Rounded to two significant figures.

Meter not in operation; quantity estimated by Kaiser Steel Corp. 8

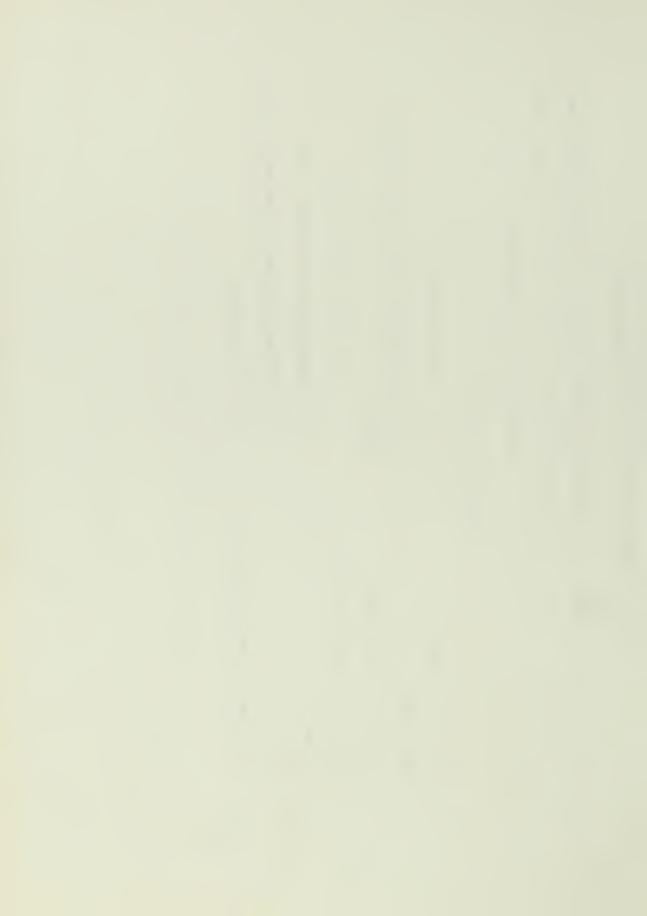


Table 2. -- Ground-water levels in observation wells

Depths of wells given in whole feet were reported by owners, drillers, or others; depths given in feet and tenths of a foot were measured below land-surface datum by the U.S. Geological Survey. Measurements are in feet below or above (+) the described point of reference.

Standardized footnotes

h. Tape measurement.	i. Affected by outside influence (wind,	elic piessule, ocean tiucs, lailloau	Water level below sea level.	Measurement from recorder chart.	Obstruction in well above water surface.	No measurement.
ů.	t to Carl	trains).	رساه ه	**	m.	ů.
well being pumped.	Well pumped recently.	Nearby well being pumped.	Nearby well pumped recently.	Estimated.	Dry.	Measurement by outside agency or
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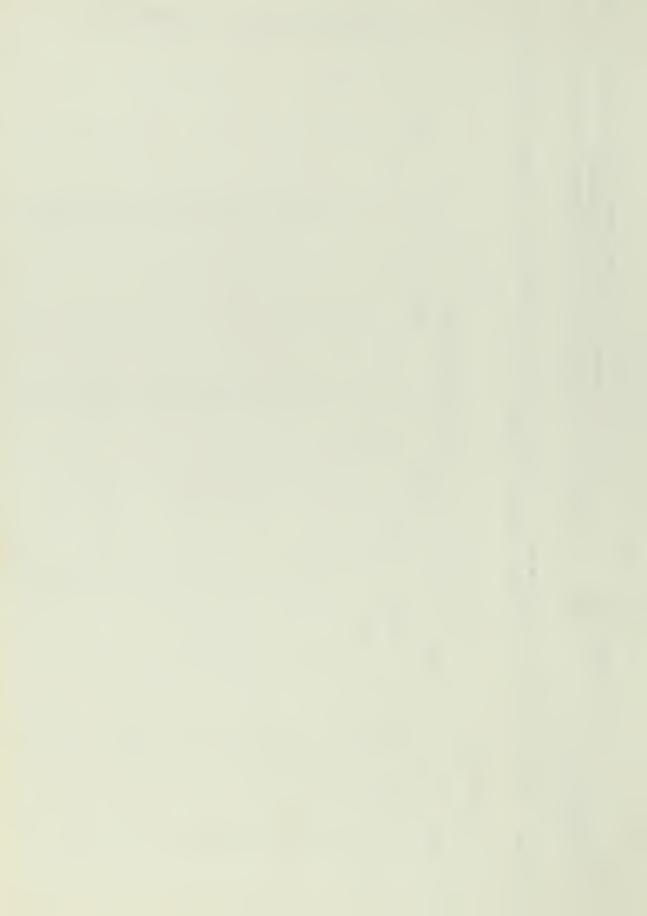


UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS COpper Mountain Hydro Subunit (X-8.BO) feet above mean sea level AREA CR BASIN - JOSEPH Tree National - Monument 3,770 Altitude of land-surface datum Depth of well 182.0 ft San Bernardino 1.004 13 May 10 340302N1161406, 1 CUNTY 14. vumles 1S/7E-27R1 CALIFU RNIA

Order of Marional Park Service (Willetts Well). In Quail Wash south of Joshua Tree (village) and west of Lost

	,	State number	1S/7E-27R1	S
1970	Vater [rve]			
15	Date			
	Water level			
land-surface datum	Date			
111	(m)			
levels are retiringed to	Apr. 4			
Alwelet	136.83			
1967	Mar. 15			
	129.75			
1966	Mar. 1			



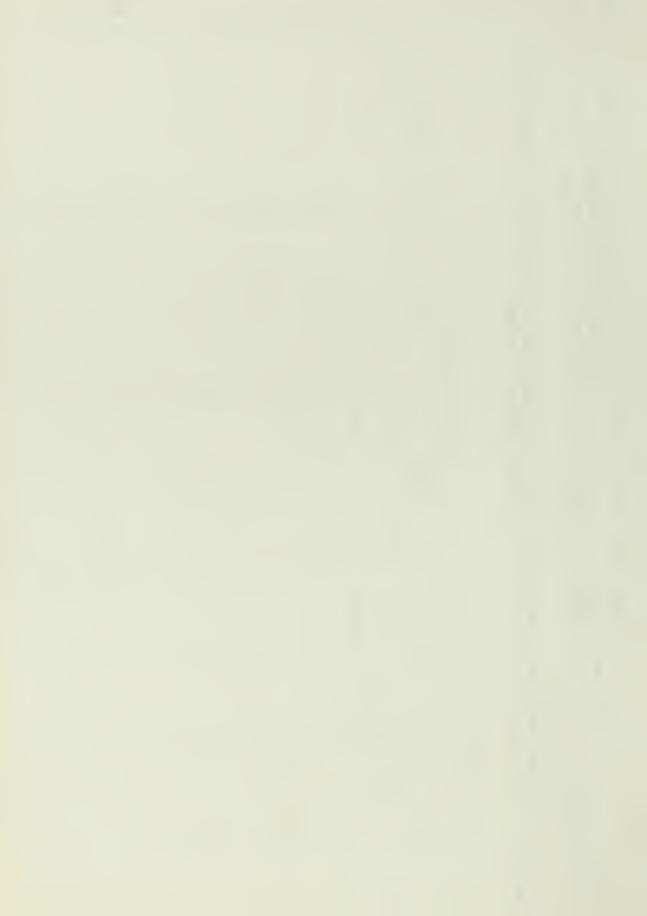
GROUND-WATER LEVELS IN OBSERVATION WELLS Copper Mountain Hydro Subunit (X-3.BO)

National Park Service (Queen well). South of the Wonderland of Rocks and about 2 miles north of AREA OF ASIV Joshue Troc National Manuscat. 4,300 Attrude of land suita - dar m 108 Det: fwell Riverside 34014911160800.1 2S/8E-3C1 . . Sheep Pass. Chil phil

Drilled domestic water-table well in residuum, diameter 8 inches.

land-surface datum H Water [... 1961, 1965-

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1970	Line in the N	1 (
8	A steer to 3														
1969	Da.														
00		3.75	92.17												
1968		Apr. 5	Oct. 30												
	2. 7. 4. 3	92.06	91.99												
1967	.,,,	Mar. 15	0ct. 25												
99		95.74	93.25												
1966	-	Mar. 1	Oct. 26						,						

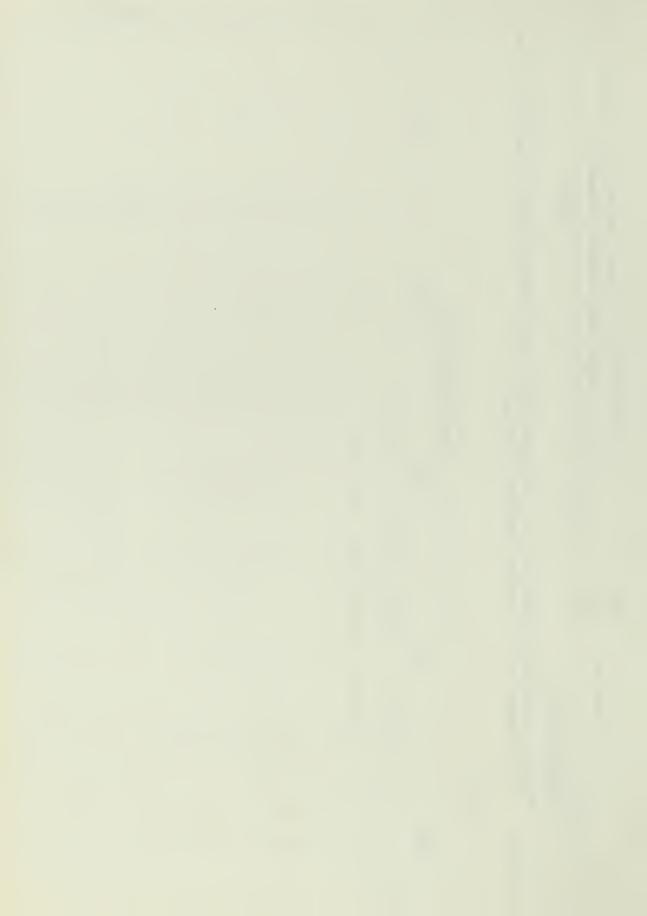


GROUND-WATER LEVELS IN OBSERVATION WELLS Copper Mountain Hydro Subunit (X-8.BO)

fert above mean sea level National Park Service (Stokes No. 2). In narrow valley west of Hidden Valley at west side of Lost AREA OR BASIN -Joshua Tree National Hommant ... Altende of land-surface datum 4,100 Horse Valley. Drilled unused well in residuum, diameter 8 inches. 290 Digith of well Riverside 340042N1161031.1 CT UNTY 2S/8E-7K1 5. w. j. . . j. . . C

		State um	70 I		25/	8E-7	7K1	S	
70 Nator level									
1970 Date									
Varer level									
Date Date									
1968 Warrie of	216.15								
	Oct. 29								
-	214.93								
1967	213.69 Mar. 15 214.50 Oct. 25								
	213.69				1				
1 1 2	Mar. 1								

20/8F_7V1

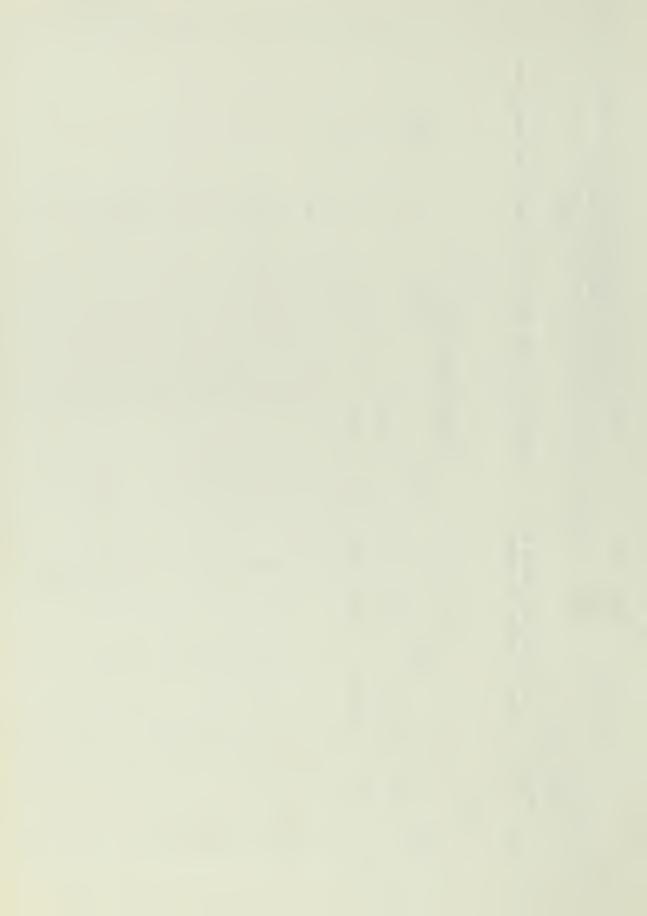


GROUND-WATER LEVELS IN OBSERVATION WELLS Copper Mountain Hydro Subunit (X-8.BO) HOVAL BOY CONTR / tutude of land-surface dutum 4,480 . ye ... O Riverside C. UNTY 2S/8E-21G2

Dug National Park Service (Lost Horse No. 2). East side of Lost Horse Valley near Ryan Campground. public supply well in residuum, diameter 48 inches.

		Medical	25/06-2162 5
1970	Da* A (1) 5.1		
ce datum.	Dars 3 cm 3 i		
land-surface datum.	41.00	Oct. 29 39.14	
1967	39.72 Apr	538,32	
1966	38.71 Mar. 15	36.04 Oct. 25	
196	Mar. 1	12	

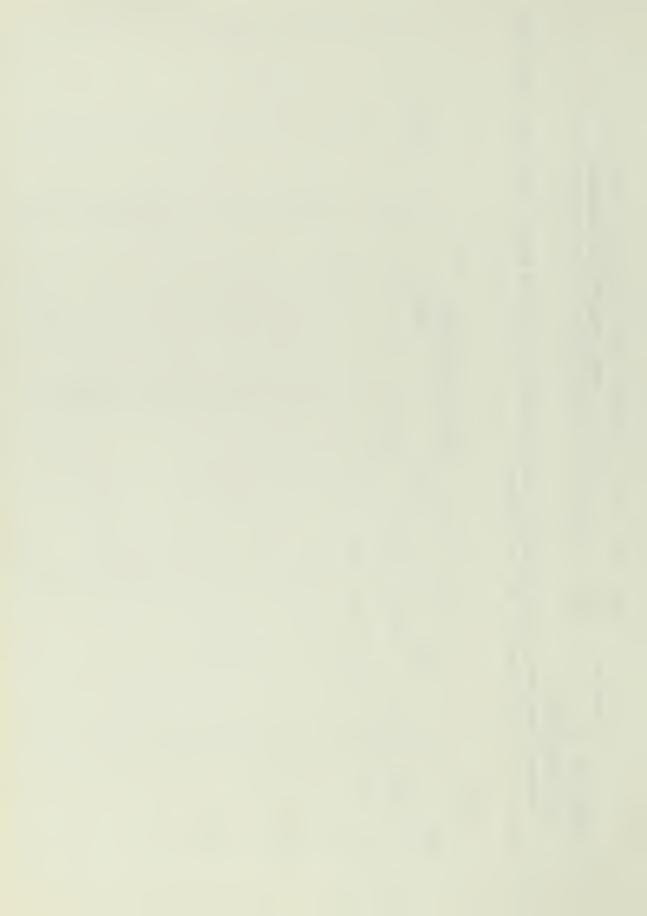
2S/8E-21G2 S



fort above mean sea level GROUND-WATER LEVELS IN OBSERVATION WELLS PINTO Hydro Subunit (X-17.CO) AREA OR BASIN Jushua Tree National Monument Attitude of land-surface datum 1347 Depth of wer. 444 Riverside Well end - unier 335718N1154034.1 2S/12E-36F1 S C UNT: State of the S

Description of the National Park Service (Dale Holmes well, Gold Rose well). In Pinto Basin, 1 mile east of Gold Crown Road at Mission well. Drilled domestic well in alluvium.

			State	riner	2s/	12B-36F1	S
2	1970	11 11 11					
**		Date					
Lowest	6	Water Evel					
land-surface datum.	1969	Date					
	88	400.61	(n)				
Fig. 1 st water lovel. Was in levels are in succedity.	1968	Apr. 5	Nov. 7				
	7	400.51	1400.37				
	1967	Nar. 17	400.6c oct. 26				
-1961-		400.91	400.60				
1961-	1966	Mar. 3	Oct. 28				



GROUND-WATER LEVELS IN OBSERVATION WELLS Pinto Hydro Subunit (X-17.CO)

AREA C.R. BASIN Riverside 3S/15R-4J1

Approach fland-surface datum. 1,080.6 575 Digith of world 335612N1152433.1

· a lev.

National Park Service (Kaiser No. 2). At east end of Pinto Basin near Raiser Steel Company's Eagle Mountain wells. Drilled well in alluvium, diameter 16 inches.

			~:	ta' i			 	3 S	/1	5E ·	-4 J	1	S	
ft	Date at 11 v.													
datum.	Date 1 - 112-11													
local land-surface datum.		Apr. 8 (a)	Nov. 7 (n)											
n or dental.		Mar. 17 c163.38	oct. 26 ,c163.78									7		
1066	8	2 c161.95	c152.94	† †	1									
		Mar.	14 Oct. 17	4 A	٠. د									

35/15F-4 T1



UNITED STATES GEOLOGICAL, EURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLSPInto Hydro Subunit (X-17.CO)

AREA OR BASIN - Joshua Tree Mational Monument

Riverside CCTNTY

CALIFORNIA

4S/11E-2701

State number

Depth of well 402

4 2 4.1

from thove mean sea level 2,975 A. htude of land-surface datum

Description of well National Park Service (Cottonwood well). In Smoketree Wash 3% miles north of Cottonwood Spring. Drilled public supply well in alluvium, diameter 12 inches. Well-code umber 3147 201 54856.1

12	
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	trum.
7	Land-surface datum.
6-4	waret level, are inferenced to
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1958-61, 1963-	
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70	Water Jevel			P										
1970	Date							1						
1969	Water Invei													
19	Date													
	Water level	183.04	182.22											
1968	Date	Apr. 5	Nov. 7											
7	Water level	180.59	181,84											
1961	Date	Mar. 17	179.49 Oct. 26											
	1		179.49											
1966	53.	Mar. 3	Oct. 28											
	-		1	.5	 									

4S/11E-27Q1

State



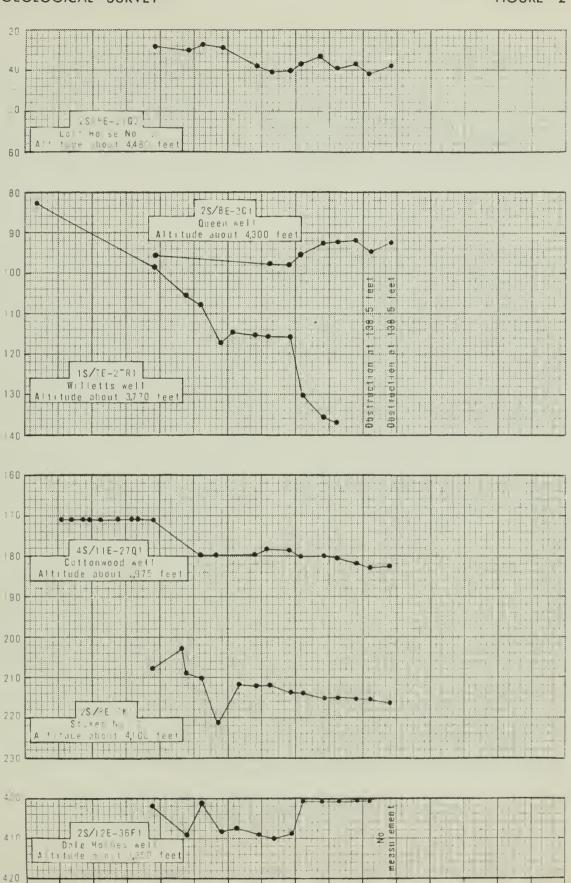
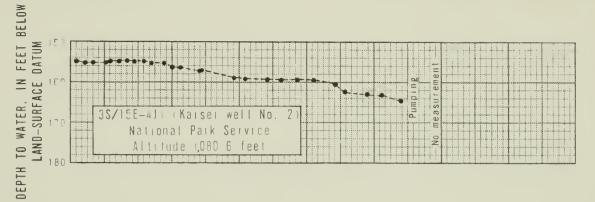


FIGURE 2.--Hydrographs of selected wells in Joshua Tree National Monument





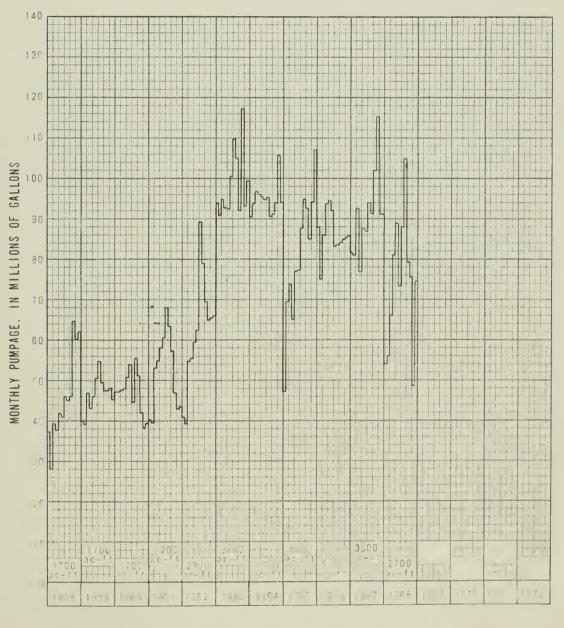


FIGURE 3.--Hydrograph of well and pumpage in eastern part of Pinto Basin





